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OM nucleic - nucleic search, using sw model

Run on: June 30, 2002, 16:04:08 ; Search time 2325.7 seconds
(Without alignments)
659.983 Million cell updates/sec

Title: US-09-303-518d-571

Perfect score: 894
Sequence: 1 atgttcgtttacatcag.....accgctataaacgcgctaa 894

Scoring table: IDENTITY-NUC
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 3472872

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database : N_Geneseq_032802:*

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23: /SIDSI/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
24: /SIDSI/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | DB ID | Description |
|------------|-------|-------------|--------|-------|-------------|
| 1 | 894 | 100.0 | 894 | 20 | AA121219 |
| 2 | 894 | 100.0 | 894 | 21 | AA253709 |
| 3 | 807.4 | 90.3 | 897 | 20 | AA121217 |
| 4 | 807.4 | 90.3 | 897 | 21 | AA253712 |
| 5 | 807.4 | 90.3 | 56485 | 21 | AA81476 |
| 6 | 807.4 | 90.3 | 349980 | 21 | AA21612 |
| 7 | 807.4 | 90.3 | 837086 | 21 | AA81489 |
| 8 | 799.4 | 89.4 | 897 | 20 | AA121218 |
| 9 | 799.4 | 89.4 | 897 | 21 | AA253711 |

| | | | | | |
|----|-------|------|---------|----|----------|
| 10 | 791.6 | 88.5 | 894 | 22 | AA91451 |
| 11 | 762.8 | 85.3 | 866 | 21 | AA253710 |
| 12 | 347.8 | 38.9 | 369 | 20 | AA212216 |
| 13 | 347.8 | 38.9 | 369 | 21 | AA81391 |
| 14 | 46.2 | 5.2 | 2061 | 24 | AA169367 |
| 15 | 42.8 | 4.8 | 924 | 22 | AA91450 |
| 16 | 42.8 | 4.8 | 33140 | 22 | AA28536 |
| 17 | 39.6 | 4.4 | 676 | 22 | AA13443 |
| 18 | 39.6 | 4.4 | 10732 | 21 | AA10594 |
| 19 | 38.6 | 4.3 | 4403765 | 22 | AA199683 |
| 20 | 38.4 | 4.3 | 687 | 22 | AA554297 |
| 21 | 38.4 | 4.3 | 2834 | 22 | AB419565 |
| 22 | 38.4 | 4.3 | 4358 | 24 | AA167895 |
| 23 | 38.4 | 4.3 | 861 | 19 | AAV40622 |
| 24 | 38 | 4.3 | 861 | 19 | AAV40622 |
| 25 | 38 | 4.3 | 4493 | 20 | AA83610 |
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| 27 | 37.4 | 4.2 | 8277 | 22 | AA531116 |
| 28 | 37.4 | 4.2 | 1191 | 23 | AA554057 |
| 29 | 37 | 4.1 | 23128 | 23 | AA559552 |
| 30 | 36.8 | 4.1 | 4411529 | 22 | AA199682 |
| 31 | 36.6 | 4.1 | 1401 | 22 | AAH01679 |
| 32 | 36.4 | 4.1 | 548 | 21 | AA646701 |
| 33 | 36.4 | 4.1 | 472 | 21 | AA14821 |
| 34 | 36.4 | 4.1 | 4451 | 24 | AA172045 |
| 35 | 36.4 | 4.1 | 65140 | 22 | AA17184 |
| 36 | 36.4 | 4.1 | 125401 | 22 | AA17184 |
| 37 | 35.6 | 4.0 | 3117 | 21 | AA55371 |
| 38 | 35.6 | 4.0 | 5340 | 21 | AA55371 |
| 39 | 35.4 | 4.0 | 606 | 21 | AA55371 |
| 40 | 35.4 | 4.0 | 32998 | 21 | AA55186 |
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| 42 | 35.2 | 3.9 | 1812 | 21 | AA553382 |
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| 45 | 35 | 3.9 | 1812 | 21 | AA253334 |
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| 54 | 34.2 | 3.8 | 2277 | 19 | AA138855 |
| 55 | 34.2 | 3.8 | 3023 | 19 | AA597605 |
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| 62 | 34 | 3.8 | 957 | 22 | AA158711 |
| 63 | 34 | 3.8 | 1146 | 22 | AA100319 |
| 64 | 34 | 3.8 | 1146 | 22 | AA100319 |
| 65 | 34 | 3.8 | 1563 | 21 | AA176264 |
| 66 | 34 | 3.8 | 1563 | 21 | AA176264 |
| 67 | 34 | 3.8 | 1860 | 23 | AA588595 |
| 68 | 34 | 3.8 | 1860 | 23 | AA588595 |
| 69 | 34 | 3.8 | 2239 | 23 | AA588595 |
| 70 | 34 | 3.8 | 2239 | 23 | AA588595 |
| 71 | 34 | 3.8 | 2685 | 22 | AA814442 |
| 72 | 34 | 3.8 | 17787 | 22 | AA102960 |
| 73 | 34 | 3.8 | 17787 | 22 | AA102960 |
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| 79 | 34 | 3.8 | 17787 | 22 | AA102960 |
| 80 | 34 | 3.8 | 17787 | 22 | AA102960 |
| 81 | 34 | 3.8 | 17787 | 22 | AA102960 |
| 82 | 34 | 3.8 | 17787 | 22 | AA102960 |

| |
|---------------------|
| N. meningitidis (S |
| Neisseria meningit |
| Neisseria meningit |
| N. meningitidis Me |
| Streptomyces sp L- |
| Moraxella catarrha |
| Genomic fragment # |
| Human nervous syst |
| Gene encoding a su |
| Mycobacterium tube |
| Pseudomonas aerugi |
| Human nervous syst |
| Nucleotide sequenc |
| DN722.2 CDNA clone |
| Human ontherin enc |
| Cadherin-like poly |
| Human diagnostic a |
| Pseudomonas aerugi |
| Propionibacterium |
| Mycobacterium tube |
| Bordetella pertuss |
| zea mays DNA fragm |
| DNA encoding a cel |
| Chrysosporium CBH1 |
| Streptomyces nours |
| Streptomyces nours |
| GTP-binding protel |
| Human gtp-binding |
| C. symbiosum open |
| Centarchaeum symbio |
| Codon-optimized mu |
| Neisseria gonorrhoe |
| Mycobacterium tube |
| AEPIIIA clone 63GA |
| Neisseria meningit |
| Nucleotide sequenc |
| Pseudomonas aerugi |
| Gene encoding a su |
| Human nervous syst |
| Human nervous syst |
| Human musculoskele |
| Homo sapiens mamma |
| Human telomerase p |
| Sequence of herpes |
| Balanus amphitrite |
| HSV-2 strain SB5 C |
| Yeast AOD9604 as80 |
| HSV-2 strain SB5 C |
| Human gene express |
| Human polynucleoti |
| Human polynucleoti |
| Human polynucleoti |
| Maize glutathione- |
| DNA encoding novel |
| DNA encoding novel |
| Escherichia coli p |
| Human reproductive |
| Human reproductive |
| DNA encoding novel |
| Human immune/haema |
| Pseudomonas aerugi |
| Drosophila melanog |
| DNA encoding novel |
| Human p3501 prote |
| Nucleotide sequenc |
| CDNA sequence #141 |
| Human mucin gene M |
| Mouse OX2RH2 degen |
| Achoviracter xylo |
| Adenovirus 17 pent |
| Alcaligenes sp. Po |

| | | | | | | | |
|---|-----|------|-----|--------|----|-----------|----------------------|
| C | 83 | 33.6 | 3.8 | 34094 | 20 | AAZ30163 | Complete nucleotide |
| C | 84 | 33.6 | 3.8 | 35059 | 19 | AAV27112 | Adenovirus 17. Ma |
| C | 85 | 33.6 | 3.8 | 534720 | 19 | AAV30458 | Rhizobium species |
| C | 86 | 33.6 | 3.8 | 536165 | 19 | AAV30455 | Rhizobium species |
| C | 87 | 33.4 | 3.7 | 2070 | 13 | AAO24875 | Human amyloidin pr |
| C | 88 | 33.4 | 3.7 | 76845 | 21 | AAAB81463 | N. meningitidis pa |
| C | 89 | 33.4 | 3.7 | 114955 | 20 | AAAS3491 | Human adenovirus A1 |
| C | 90 | 33.4 | 3.7 | 349980 | 21 | AAE21608 | Neisseria meningit |
| C | 91 | 33.2 | 3.7 | 749 | 22 | AAH64931 | Human secreted pro |
| C | 92 | 33.2 | 3.7 | 1155 | 21 | AAAS2953 | Synthetic Bacillus |
| C | 93 | 33.2 | 3.7 | 1158 | 18 | AAV06396 | Maize optimised ge |
| C | 94 | 33.2 | 3.7 | 1158 | 22 | AAAB6768 | B. t. maize optimise |
| C | 95 | 33.2 | 3.7 | 2495 | 21 | AAAF1954 | Human ORF2957 |
| C | 96 | 33.2 | 3.7 | 29879 | 14 | AAOC6806 | Human ORF2957 |
| C | 97 | 33.2 | 3.7 | 705 | 21 | AAAB81712 | erya region of S- |
| C | 98 | 33 | 3.7 | 575 | 21 | AAAB81712 | N. meningitidis pa |
| C | 99 | 33 | 3.7 | 705 | 23 | ABLO3001 | Drosophila melanog |
| C | 100 | 33 | 3.7 | 754 | 22 | AAH00214 | Stenotrophomonas m |

ALIGNMENTS

RESULT 1

| | | |
|----|---|------------------------|
| ID | AA12219 | standard; DNA; 894 BP. |
| AC | AA12219; | |
| XX | | |
| DT | 08-OCT-1999 | (first entry) |
| XX | | |
| DE | Neisseria gonorrhoeae complete ORF138 sequence. | |
| XX | | |
| KW | Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine; | |
| KW | treatment; Neisseria infection; meningitis; septicaemia; gonorrhea; ss | |
| XX | | |
| OS | Neisseria gonorrhoeae. | |
| XX | | |
| PN | W09924578-A2. | |
| XX | | |
| PD | 20-MAY-1999. | |
| XX | | |
| XX | | |
| PF | 09-OCT-1998; | 98WO-1B01655. |
| XX | | |
| PR | 01-SEP-1998; | 98GB-0019016. |
| PR | 06-NOV-1997; | 97GB-0023516. |
| PR | 14-NOV-1997; | 97GB-0024190. |
| PR | 18-NOV-1997; | 97GB-0024386. |
| PR | 27-NOV-1997; | 97GB-0025158. |
| PR | 10-DEC-1997; | 97GB-0026147. |
| PR | 14-JAN-1998; | 98GB-0000759. |
| XX | | |
| PA | (CHIR-) CHIRON SPA. | |
| XX | | |
| PI | Grandi G, Masignani V, Pizza M, Rappuoli R, Scarlato V; | |
| XX | | |
| DR | WPI: 1999-327407/27. | |
| DR | P-PSDB; AAY38784. | |
| XX | | |
| PT | Proteins from Neisseria meningitidis and N. gonorrhoeae useful for | |
| PT | diagnosis, treatment and prevention of infection | |
| XX | | |
| PS | Claim 9; Page 327-328; 524pp; English. | |
| XX | | |
| CC | Nucleotide sequences AA121972-12358 represent open reading frames | |
| CC | (ORFs) of Neisseria meningitidis and N. gonorrhoeae which encode | |
| CC | antigenic proteins (see AAY38499-Y38944). The antigenic proteins, their | |
| CC | fragments, their nucleic acids and antibodies are used for diagnosis, | |
| CC | prevention (as vaccines) or treatment of Neisseria infections, | |
| CC | such as meningitis, septicaemia and gonorrhea. Both organisms | |
| CC | are closely related. Fragments of the nucleic acids are useful | |
| CC | as hybridisation probes and antisense reagents. | |
| XX | | |

[illegible]

| | |
|----|--|
| XX | (CHIR) CHIRON CORP. |
| PA | |
| XX | |
| PI | Frazer CM, Hickey E, Peterson J, Tettelin H, Venter JC; |
| PI | Masignani V, Galeotti C, Mora M, Ratti G, Scarselli M, Scarlato V; |
| PI | Rappoli R, Pizza M, |
| XX | |
| DR | WPI; 2000-318079/27. |
| XX | |
| PT | Isolated nucleotide sequences of Neisseria meningitidis which can be |
| PT | used in the diagnosis and treatment of N. meningitidis infection and |
| PT | other Neisserial infections, for example, N.gonorrhoea . |
| XX | |
| XX | Claim 7 : Page 629-665; 1760pp; English. |
| CC | |
| CC | The present invention describes methods of obtaining immunogenic |
| CC | proteins from Neisseria genomic sequences. AAA81453 to AAA82414 |
| CC | represent specifically claimed Neisseria meningitidis genomic DNA |
| CC | sequences; AAA81260 to AAA81303 and AAB25620 to AAB25663 represent |
| CC | Neisseria DNA sequences and their corresponding proteins; AAA81254 to |
| CC | AAA81259 and AAA81304 to AAA81321 represent PCR primers used in the |
| CC | isolation of Neisseria meningitidis DNA sequences; and AAA81322 to |
| CC | AAA81452 represent Neisseria meningitidis MenB polynucleotide ORF |
| CC | sequences, which are all used in the exemplification of the present |
| CC | invention. The nucleic acid sequences, protein sequences, and antibodies |
| CC | against them, can be used in the manufacture of a composition. The |
| CC | composition can be used as a medicament (or in the manufacture of a |
| CC | medicament) for treating, preventing or diagnosing infection due to |
| CC | Neisserial bacteria. For example, some of the identified proteins could |
| CC | be components of vaccines against Meningococcus B; against all serotypes |
| CC | and/or against all pathogenic Neisseriae. Identification of sequences |
| CC | from the bacterium will also facilitate production of biological probes, |
| CC | particularly organism-specific probes. Attempts to make efficacious |
| CC | Meningococcus B vaccines have failed mainly due to antigen tolerance. |
| CC | Multivalent vaccines have also been tried but none have successfully |
| CC | overcome antigenic variability. The provision of further, complete |
| CC | sequences may provide an opportunity to identify secreted or surface |
| CC | exposed proteins that may be presumed targets for the immune system and |
| CC | which are not antigenically variable or at least more conserved than |
| XX | other more variable regions. |
| XX | |
| SQ | Sequence 837096 BP; 207534 A; 227065 C; 205215 G; 197280 T; 2 other; |
| | |
| | Query Match 90.3%; Score 807.4; DB 21; Length 837096; |
| | Best Local Similarity 94.5%; Pred. No. 5e-220; |
| | Matches 848; Conservative 0; Mismatches 46; Indels 3; Gaps 1 |
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| Db | 453771 atgttcgttttaacaattcagcgatgcttccccctttggacgcgaatcacatccgttg 60 |
| OY | 61 accgccgcgctccaatgatgcctctccctctgctgcttctctgtcgaacgcttggaaac 120 |
| Db | 453831 accgccgcgctccaatgatgcctctccctctgctgcttctctgtcgaacgcttggaaac 120 |
| OY | 121 cggctcggacatctcggcggtttacctttaagaaggacgcgcgcgcacatctogccaat 180 |
| Db | 453891 cggctcggacatctcggcggtttacctttaagaaggacgcgcgcgcacatctogccaat 180 |
| OY | 181 atgcgcgagcgcggtttgaaccgccgacagcagcagcgctgttttttgggaaagc 240 |
| Db | 453951 atgcgcgagcgcggtttgaaccgccgacagcagcagcgctgttttttgggaaagc 240 |
| OY | 241 gcaaatgcyggtttggaactgcccgcggttttcaaaaaaccggaagacatcgaaaca 300 |
| Db | 454011 gcaaaaagcggtttggaactgcccgcggttttcaaaaaaccggaagacatcgaaaca 300 |
| OY | 301 atgttcaaacggttacacgcgcttggaaacacgttcagcagcagctttggacaaggcgaagg 360 |
| Db | 454071 atgttcaaacggttacacgcgcttggaaacatltgcagcagcgttttggacaacaacgaagg 360 |
| OY | 361 ctgcgttgtatacagccgcacatcgcgacgttagcatlltggcggacgcgtataatcagccag 420 |


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|||||
Db 454131 ctgcattatcaccgacacgtcgacgtacgtatttgccgagcgtacataacgcaag 454190
OY 421 cagcttcgtccacacgtgacgcatgttcaagccgacgaataatcaagcgatagacaa 480
|||||
Db 454191 cagcttcgtccacacgtgacgcatgttcaagccgacgaataatcaagcgatagacaa 454250
OY 481 atcatgagcgagcgaggtgctgcgcaaggaacacccgcgcacgcatatacaggg 540
|||||
Db 454251 atcatgagcgagcgaggtgctgcgcaaggaacacccgcgcacgcatatacaggg 454310
OY 541 gtcaacaatcatcaagccctgcgcgagcgaggaacacacatcctcgcgcacac 600
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Db 454311 gtcaacaatcatcaagccctgcgcgagcgaggaacacacatcctcgcgcacac 454370
OY 601 gtcccttcctcgacgaggaagcgg---cgagctggtggcgagtttttcggcaacctga 657
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OY 658 tacacatgacactggtgcgcaaatgtgacacgtcaaaagcgctgtaaacctgttttc 717
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Db 454431 tatacctgacgctggtgcgcaaatgtgacacgtcaaaagcgctgtaaacctgttttc 454490
OY 718 tgcctgacgacgtgcgcgacgacgaaggtctgtgtgacatccgccccgtccaagg 777
|||||
Db 454491 tgcctgacgacgtgcgcgacgacgaaggtctgtgtgacatccgccccgtccaagg 454550
OY 778 gaattgaacgcaacaaagccacagatgctgcgcgtgttcaacgcgcaatataatgg 837
|||||
Db 454551 gaattgaacgcaacaaagccacagatgctgcgcgtgttcaacgcgcaatataatgg 454610
OY 838 atagcgcttttcgacgacgagatctgttatagtacaaacgctataaagcgctaa 894
|||||
Db 454611 atagcgcttttcgacgacgagatctgttatagtacaaacgctataaagcgctaa 454667

```

RESULT 8

AAZ12218 ID AAZ12218 standard; DNA: 897 BP.

AAZ12218:

AC AAZ12218:

DT 08-OCT-1999 (first entry)

DE Neisseria meningitidis strain A complete ORF138 sequence.

KM Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine; ss.

OS treatment; Neisseria infection; meningitis; septicemia; gonorrhea; ss.

OS Neisseria meningitidis.

PN WO9924578-A2.

PD 20-MAY-1999.

PF 09-OCT-1998; 98WO-1B01665.

PR 01-SEP-1998; 98GB-0019016.

PR 06-NOV-1997; 97GB-0023516.

PR 14-NOV-1997; 97GB-0024180.

PR 18-NOV-1997; 97GB-0024386.

PR 27-NOV-1997; 97GB-0025158.

PR 10-DEC-1997; 97GB-0026147.

PR 14-JAN-1998; 98GB-0000759.

PA (CHIR-) CHIRON SPA.

PI Grandi G, Masianni V, Pizze M, Rappuoli R, Scarlato V;

XX WPI: 1999-327407/27.

XX P-PSDB: AAY38783.

XX Proteins from Neisseria meningitidis and N. gonorrhoeae useful for

```

PT diagnosis, treatment and prevention of infection
XX
XX Claim 9; Page 326-327; 524pp; English.
PS
CC Nucleotide sequences AAZ11972-21358 represent open reading frames
CC (ORFs) of Neisseria meningitidis and N. gonorrhoeae which encode
CC antigenic proteins (see AAY38499-Y38944). The antigenic proteins, their
CC fragments, their nucleic acids and antibodies are used for diagnosis,
CC prevention (as vaccines) or treatment of Neisseria infections,
CC such as meningitis, septicemia and gonorrhea. Both organisms
CC are closely related. Fragments of the nucleic acids are useful
CC as hybridisation probes and antisense reagents.
XX
XX Sequence 897 BP; 225 A; 266 C; 225 G; 181 T; 0 other:
SQ

```

Query Match 89.4%; Score 799.4; DB 20; Length 897;
 Best Local Similarity 94.0%; Pred. No. 6.4e-219;
 Matches 843; Conservative 0; Mismatches 51; Indels 3; Gaps 1;

```

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OY 121 cggctcgacatctgcgcttcttcaatgaagaagacgagcgagcgtcgtccaat 180
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Db 121 cggctcgacatctgcgcttcttcaatgaagaagacgagcgagcgtcgtccaat 180
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OY 361 ctgcgttcaacacgacacacacacacacacacacacacacacacacacacacac 420
Db 361 ctgcgttcaacacgacacacacacacacacacacacacacacacacacacacac 420
OY 421 cagcttcgcttcaacacacacacacacacacacacacacacacacacacacacac 480
Db 421 cagcttcgcttcaacacacacacacacacacacacacacacacacacacacacac 480
OY 481 atcatgacgagcgaggtgctgcgcaaggaacacacacacacacacacacacacac 540
Db 481 atcatgacgagcgaggtgctgcgcaaggaacacacacacacacacacacacacac 540
OY 541 gtcaacaatcatcaagccctgcgcgagcgaggaacacacacacacacacacacacac 600
Db 541 gtcaacaatcatcaagccctgcgcgagcgaggaacacacacacacacacacacacac 600
OY 541 gtcaacaatcatcaagccctgcgcgagcgaggaacacacacacacacacacacacac 600
Db 541 gtcaacaatcatcaagccctgcgcgagcgaggaacacacacacacacacacacacac 600
OY 601 gtcccttcctcgacgaggaagcgg---cgagctggtggcgagtttttcggcaacctga 657
Db 601 gtcccttcctcgacgaggaagcggcgatggtggtgatttcttcgcaaacctgcc 660
OY 601 gtcccttcctcgacgaggaagcggcgatggtggtgatttcttcgcaaacctgcc 660
Db 601 gtcccttcctcgacgaggaagcggcgatggtggtgatttcttcgcaaacctgcc 660
OY 658 tacacatgacactggtgcgcaaatgtgacacgtcaaaagcgctgtaaacctgttttc 717
Db 658 tacacatgacactggtgcgcaaatgtgacacgtcaaaagcgctgtaaacctgttttc 717
OY 661 tatacctgacgctggtgcgcaaatgtgacacgtcaaaagcgctgtaaacctgttttc 720
Db 661 tatacctgacgctggtgcgcaaatgtgacacgtcaaaagcgctgtaaacctgttttc 720
OY 718 tgcctgacgacgtgcgcgacgacgaaggtctgtgtgacatccgccccgtccaagg 777
Db 718 tgcctgacgacgtgcgcgacgacgaaggtctgtgtgacatccgccccgtccaagg 777
OY 721 tgcctgacgacgtgcgcgacgacgaaggtctgtgtgacatccgccccgtccaagg 780
Db 721 tgcctgacgacgtgcgcgacgacgaaggtctgtgtgacatccgccccgtccaagg 780
OY 778 gaattgaacgcaacaaagccacagatgctgcgcgtgttcaacgcgcaatataatgg 837
Db 778 gaattgaacgcaacaaagccacagatgctgcgcgtgttcaacgcgcaatataatgg 837

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Db 781 gaattgaacgagcacaagccatgatgcgcggttaccgcgaatcgcgaatcgg 840
 QY 838 ataccgcttttcgcgcgcgaatcgtttatgtacacacgcgtataaagcgcgtaa 894
 Db 841 ataccgcttttcgcgcgcgaatcgtttatgtacacacgcgtataaagcgcgtaa 897
 RESULT 9
 AA253711
 ID AA253711 standard: DNA: 897 BP.
 AC AA253711;
 XX 21-MAR-2000 (first entry)
 DE Neisseria meningitidis ORF 505 partial DNA sequence SEQ ID NO:1371.
 KW Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;
 KW antigenic; diagnosis; immunogenic; infection; meningitis; septicaemia;
 KW antibacterial; gene therapy; ds.
 OS Neisseria meningitidis.
 XX MO9957280-AZ.
 XX 11-NOV-1999.
 PD 30-APR-1999; 99WO-US09346.
 XX 01-MAY-1998; 98US-0083758.
 PR 31-JUL-1998; 98US-0094869.
 PR 02-SEP-1998; 98US-0098994.
 PR 02-SEP-1998; 98US-0099062.
 PR 09-OCT-1998; 98US-0103749.
 PR 09-OCT-1998; 98US-0103794.
 PR 09-OCT-1998; 98US-0103796.
 PR 25-FEB-1999; 99US-0121528.
 XX
 PA (CHIR) CHIRON CORP.
 PA (GENO-) INST GENOMIC RES.
 XX
 PI Fraser C, Galeotti C, Grandi G, Hickey E, Maignani V, Mora M;
 PI Petersen J, Piazza M, Rappuoli R, Ratti G, Scalzo E, Scarselli M;
 PI Tettelin H, Venter JC.
 XX WPI: 2000-062150/05.
 DR P-PSDB; AAY74949.
 XX
 PT Novel Neisserial polypeptides predicted to be useful antigens for
 PT vaccines and diagnostics
 XX
 PS Claim 7; Page 746; 1453pp: English.
 XX
 CC AA253015 to AA254536, AA254577 to AA254615, and AAY74253 to AAY75941
 CC represent novel Neisseria meningitidis and N. gonorrhoeae polynucleotides
 CC and polypeptides. AA254537 to AA254576 and AA254616 to AA255473 represent
 CC PCR primers used in the exemplification of the present invention. The
 CC polypeptides, the polynucleotides, antibodies and compositions of
 CC the invention can be used as vaccines, as diagnostic reagents, and as
 CC immunogenic compositions. The polypeptides can be used in the
 CC manufacture of medicaments for treating or preventing infection due to
 CC presence of Neisseria bacteria (e.g. meningitis and septicaemia), to detect the
 CC presence of Neisseria bacteria, or to raise antibodies. They may also
 CC be used to screen for agonists or antagonists, which may themselves
 CC have use as antibacterial agents. The polynucleotides of the invention
 CC may also be used in gene therapy protocols.
 XX
 SQ Sequence 897 BP; 225 A; 266 C; 225 G; 181 T; 0 other;

Query Match 89.4%; Score 799.4; DB 21; Length 897;
 Best Local Similarity 94.0%; Pred. No. 6; 4e-219;

Matches 843; Conservative 0; Mismatches 51; Indels 3; Gaps 1;
 QY 1 atgttcgttaccaatcagctgttccccccttgggaacccgacatccctgtg 60
 Db 1 atgttcgttaccaatcagctgttccccccttgggaacccgacatccctgtg 60
 QY 61 accgcctgtcctaattgcctcctcgtcgttcctcgtcgttcgtcgtcgttcgt 120
 Db 61 accgcctgtcctaattgcctcctcgtcgttcctcgtcgttcgtcgtcgttcgt 120
 QY 121 cggctcggacatcgtcgttcctttaaaggaagacgcgcgcgtcgtccat 180
 Db 121 cggctcggacatcgtcgttcctttaaaggaagacgcgcgcgtcgtccat 180
 QY 181 atgcgcgagcggttgcaccccgacagcaggttcacacgcgttttgcggaag 240
 Db 181 atgcgcgagcggttgcaccccgacagcaggttcacacgcgttttgcggaag 240
 QY 241 gcaaatgcggttgcgaacttgcgcccggttttccaanaaacgggaagacatcgaaca 300
 Db 241 gcaaatgcggttgcgaacttgcgcccggttttccaanaaacgggaagacatcgaaca 300
 QY 301 atgtcaaacggttacacgcgttggaacggtcagcagcttggacaagggcgaagg 360
 Db 301 atgtcaaacggttacacgcgttggaacggtcagcagcttggacaagggcgaagg 360
 QY 361 ctgtcgttcacacgcgcacatcgcgcagctacgatttggcgcgcgtacatcgcag 420
 Db 361 ctgtcgttcacacgcgcacatcgcgcagctacgatttggcgcgcgtacatcgcag 420
 QY 421 cagcttcgttcacacgcgcagctacgatttggcgcgcgtacatcgcag 480
 Db 421 cagcttcgttcacacgcgcagctacgatttggcgcgcgtacatcgcag 480
 QY 481 atcatgcagcgagcaggttgcgcgcgaaggaacacgcgcgcgtacatcgcag 540
 Db 481 atcatgcagcgagcaggttgcgcgcgaaggaacacgcgcgcgtacatcgcag 540
 QY 541 gttcaacaatcacaagcctcgtcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 600
 Db 541 gttcaacaatcacaagcctcgtcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 600
 QY 601 gtcccttcgc 657
 Db 601 gtcccttcgc 657
 QY 658 tac 717
 Db 658 tac 717
 QY 718 tgcctgc 777
 Db 718 tgcctgc 777
 QY 778 gaattgaacgagcacaagccacacacacacacacacacacacacacacacacac 837
 Db 778 gaattgaacgagcacaagccacacacacacacacacacacacacacacacacac 837
 QY 838 ataccgcttttcgcgcgcgaatcgtttatgtacacacgcgtataaagcgcgtaa 894
 Db 841 ataccgcttttcgcgcgcgaatcgtttatgtacacacgcgtataaagcgcgtaa 897
 RESULT 10
 AAF91451
 ID AAF91451 standard: DNA: 894 BP.
 AC AAF91451;
 XX 04-MAY-2001 (first entry)
 DE N. meningitidis (serogroup B) HtrB gene coding region, SEQ ID:77.
 XX

KM Modified Gram-negative bacterium; outer membrane vesicle; bleb; vaccine;
 KM genetically modified; protective antigen expression; LPS detoxification;
 KM LPS; lipid A; homologous recombination vector; immunisation;
 KM immunoprotective; non-toxic; paediatric; HtrB; ds.
 XX
 OS Neisseria meningitidis.
 PN WO200109350-A2.
 PD 08-FEB-2001.
 PF 31-JUL-2000; 2000MO-EP07424.
 PR 03-AUG-1999; 99GB-0018319.
 PA (SMIR) SMITHKLINE BEECHAM BIOLOGICALS.
 PI Berthel EJ, Dalemans WLJ, Denoel P, Dequesne G, Feron C, Lobet Y;
 PI Poolman J, Thiry G, Thonard J, Voet P;
 DR WPI; 2001-138654/14.
 DR P-PSDB; AAB60652.
 XX
 PT New isolated polynucleotide useful for outer membrane vesicle
 PT preparation from Gram-negative bacterial strain for vaccination of
 PT microbial infections -
 PS
 PS Claim 46; Page 97-98; 128pp; English.
 XX
 CC The invention relates to a genetically-engineered outer membrane vesicle
 CC (bleb) preparation from a Gram-negative bacterium for use as a vaccine.
 CC The blebs of the invention are improved with respect to their
 CC immunogenicity and toxicity by the introduction of one or more genetic
 CC changes to the chromosome of the bacterium from which the blebs are
 CC derived. The changes made include the upregulation of protective antigen
 CC expression, the downregulation of immunodominant non-protective antigen
 CC expression, and genetic changes which result in detoxification of the
 CC Lipid A moiety of lipopolysaccharide (LPS). The invention also
 CC encompasses modified Gram-negative bacterial strains from which the bleb
 CC preparations are made, a vector suitable for performing recombination
 CC events (for the generation of the modified bacterial strains), and an
 CC bacterially-derived nucleic acid sequences used in such a vector, and an
 CC immunoprotective and non-toxic Gram-negative bleb, ghost, or killed whole
 CC cell vaccine suitable for paediatric use. The bleb preparation is useful
 CC in the manufacture of a medicament for immunising a human host against a
 CC disease caused by infection of one or more of the following: . Neisseria
 CC meningitidis, Neisseria gonorrhoeae, Haemophilus influenza, Moraxella
 CC catarrhalis, Pseudomonas aeruginosa, Chlamydia trachomatis, and Chlamydia
 CC pneumoniae. The invention may also be used to provide immunisation against
 CC the influenza virus. Bacterially derived nucleotide sequences of the
 CC invention are used in the performance of homologous recombination events
 CC up to 1000 bp upstream of a bacterial chromosomal gene in order to either
 CC increase or decrease expression of that gene. Immunoprotective and
 CC non-toxic Gram-negative bleb, ghost, or killed whole cell vaccines
 CC are more immunogenic, less toxic and safer, and are particularly useful
 CC for paediatric use. The present sequence represents the specifically
 CC claimed Neisseria meningitidis HtrB coding sequence.
 XX
 SO Sequence 894 BP; 224 A; 266 C; 224 G; 180 T; 0 other;

Query Match 88.5%; Score 791.6; DB 22; Length 894;
 Best Local Similarity 93.6%; Pred. No. 1.1e-216;
 Matches 837; Conservative 0; Mismatches 54; Indels 3; Gaps 1;

QY 1 atgttttggttaacatgagctgtttcccttgcgaacgcatgcaatcctgtg 60
 DB 1 atgttttggttaacatgagctgtttcccttgcgaacgcatgcaatcctgtg 60
 QY 61 accgacctgataatgacctccctcctgctgtcctgtcgcacacgctgggaac 120
 DB 61 accgacctgataatgacctccctcctgctgtcctgtcgcacacgctgggaac 120

QY 121 cggctcgacacatctgctgttttactttaaggaaacgacgacatctgccaat 180
 DB 121 cggctcgacacatctgctgttttactttaaggaaacgacgacatctgccaat 180
 QY 181 atcgccgagcggtgttgaaaccccgacacgacgacgacgacgacgacgacg 240
 DB 181 atcgccgagcggtgttgaaaccccgacacgacgacgacgacgacgacgacg 240
 QY 241 gcaaatcgctgttggaactgtcccccgcgttttccaaanaaacggaacatcgaa 300
 DB 241 gcaaatcgctgttggaactgtcccccgcgttttccaaanaaacggaacatcgaa 300
 QY 301 atgttcaaaagcgttacacgacgctggtgaaacacgttcgaacgacgcttgga 360
 DB 301 atgttcaaaagcgttacacgacgctggtgaaacacgttcgaacgacgcttgga 360
 QY 361 ctgctgttcacatcgcgcacacatcgacgacgacgacgacgacgacgacgac 420
 DB 361 ctgctgttcacatcgcgcacacatcgacgacgacgacgacgacgacgacgac 420
 QY 421 cagcttcgcttcacacgacgacgacgacgacgacgacgacgacgacgacgac 480
 DB 421 cagcttcgcttcacacgacgacgacgacgacgacgacgacgacgacgacgac 480
 QY 481 atcatgcaagcggtgcaaggttcgcaagaaagcaaacgacgacgacgacgac 540
 DB 481 atcatgcaagcggtgcaaggttcgcaagaaagcaaacgacgacgacgacgac 540
 QY 541 gtcacaacatataaagacgctgacgacgacgacgacgacgacgacgacgac 600
 DB 541 gtcacaacatataaagacgctgacgacgacgacgacgacgacgacgacgac 600
 QY 601 gtcac 660
 DB 601 gtcac 660
 QY 661 gtcac 720
 DB 661 gtcac 720
 QY 718 tgcctgcaagcgttcgcaacgacgacgacgacgacgacgacgacgacgac 777
 DB 718 tgcctgcaagcgttcgcaacgacgacgacgacgacgacgacgacgacgac 777
 QY 778 gaattgaacgcaac 837
 DB 778 gaattgaacgcaac 837
 QY 838 atagccgcttccgacgacgacgacgacgacgacgacgacgacgacgacgac 894
 DB 841 atagccgcttccgacgacgacgacgacgacgacgacgacgacgacgacgac 894

RESULT 11

AAZ53710 standard; DNA; 866 BP.

AAZ53710:

21-MAR-2000 (first entry)

Neisseria meningitidis ORF 505 partial DNA sequence SEQ ID NO:1369.

Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;

antigenic; diagnosis; immunogenic; infection; meningitis; septicemia;

antibacterial; gene therapy; ds.

Neisseria meningitidis.

WO9957280-A2.

11-NOV-1999.

Claim 7; Page 744-745; 1453pp; English.

Matches 812; Conservative 1; Mismatches 43; Indels 4; Gaps 2

| | | | | |
|-----------|---|-----|--|-----|
| D | b | 364 | ctgcattcatcaacgcgcacatcgcgcagctacgatttggcgcgacgtactacgcagc | 423 |
| O | y | 421 | cagcttcggttccacctctgcaccccatgtacaagccgcgaaatacaaaagc | 480 |
| D | b | 424 | cagcttcggttccacccgttgcacccatgtacaacccgcgaaatacaagc | 483 |
| O | y | 481 | atcatgcagcgcgcaagcgctgcgcgcaaaagcgcgcaccccgcatacaagg | 540 |
| D | b | 484 | atcatgcagcgcgcaagcgctgcgcgcaaaagcgcgcaccccgcatacaagg | 543 |
| O | y | 541 | gtcaacaacatcatcaaaagccctctgcgcgcaagcgcacatcatctgccgacc | 600 |
| D | b | 544 | gtcaacaacatcatcaaaagccctctgcgcgcaagcgcacatcatctgccgacc | 602 |
| O | y | 601 | gtccctctctccgaagaagccg---cgccgctgtggcgcgatttcttcgcaaac | 657 |
| D | b | 603 | gtccctctctccgaagaagccg---cgccgctgtggcgcgatttcttcgcaaac | 662 |
| O | y | 658 | tacaccaatgcacttgcgcgcaaaattgagacacgtccaaagcgtataaacct | 717 |
| D | b | 663 | tataccatgcacttgcgcgcaaaattgagacacgtccaaagcgtataaacct | 722 |
| O | y | 718 | tgcctgcgaagcctgtccgcagcagcaagcctctgtgtgcacatccgcctcca | 777 |
| D | b | 723 | tgcctgcgaagcctgtccgcagcagcaagcctctgtgtgcacatccgcctcca | 782 |
| O | y | 778 | gaattgacgcgcgaacaaagcccaacgctgcgcgcgtgttcaacccgaatcga | 837 |
| D | b | 783 | gaattgacgcgcgcgaacaaagcccaacgctgcgcgcgtgttcaacccgaatcga | 842 |
| O | y | 838 | atacgcgcgtttcttcgaacga | 857 |
| D | b | 843 | atacgcgcgtttcttcgaacga | 862 |
| RESULT 12 | | | | |
| ID | AAZ12216 | | | |
| XX | AAZ12216 standard; DNA; 369 BP. | | | |
| AC | AAZ12216; | | | |
| XX | | | | |
| DT | 08-OCT-1999 (first entry) | | | |
| DE | Neisseria meningitidis partial ORF138 sequence. | | | |
| KW | Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine; | | | |
| KW | treatment; Neisseria infection; meningitis; septicemia; gonorrhea; ss | | | |
| XX | Neisseria meningitidis. | | | |
| OS | | | | |
| PN | MO9924578-A2. | | | |
| PD | 20-MAY-1999. | | | |
| XX | | | | |
| PF | 09-OCT-1998; 98WO-1B01665. | | | |
| XX | | | | |
| PR | 01-SEP-1998; 98GB-0019016. | | | |
| PR | 06-NOV-1997; 97GB-0023516. | | | |
| PR | 14-NOV-1997; 97GB-0024190. | | | |
| PR | 18-NOV-1997; 97GB-0024386. | | | |
| PR | 27-NOV-1997; 97GB-0025158. | | | |
| PR | 10-DEC-1997; 97GB-0026147. | | | |
| PR | 14-JAN-1998; 98GB-0000759. | | | |
| XX | | | | |
| PA | (CHIR-) CHIRON SPA. | | | |
| PI | Grandi G, Masignani V, Pizza M, Rappuoli R, Scarlato V; | | | |
| XX | | | | |
| DR | WPI; 1999-327407/27. | | | |
| DR | P-PSDB; AAY36781. | | | |
| XX | | | | |
| PT | Proteins from Neisseria meningitidis and N. gonorrhoeae useful for | | | |
| PT | diagnosis, treatment and prevention of infection | | | |

XX Claim 9; Page 325; 524pp; English.
 PS Nucleotide sequences AA211972-212358 represent open reading frames
 CC (ORFs) of *Neisseria meningitidis* and *N. gonorrhoeae* which encode
 CC antigenic proteins (see AY38499-Y38944). The antigenic proteins, their
 CC fragments, their nucleic acids and antibodies are used for diagnosis,
 CC prevention (as vaccines) or treatment of *Neisseria* infections,
 CC such as meningitis, septicemia and gonorrhea. Both organisms
 CC are closely related. Fragments of the nucleic acids are useful
 CC as hybridisation probes and antisense reagents.
 CC
 XX Sequence 369 BP; 84 A; 107 C; 93 G; 84 T; 1 other;
 SQ

Query Match 38.9%; Score 347.8; DB 20; Length 369;
 Best Local Similarity 96.2%; Pred. No. 1e-89;
 Matches 355; Conservative 1; Mismatches 13; Indels 0; Gaps 0;
 QY 1 atgttcgtttacaattcagcgtgttccccccttgcgaaccgcatcgtctgtg 60
 Db 1 atgttcgtttacaattcagcgtgttccccccttgcgaaccgcatcgtctgtg 60
 QY 61 accgcctgtcccaatgcctcctcctcgtcgtcgttctgcacacgctgggaac 120
 Db 61 accgcctgtcccaatgcctcctcctcgtcgtcgttctgcacacgctgggaac 120
 QY 121 cgcctcgacatctgcgtcttaccctttaaaggaagacgcgcgcacatcgtccaat 180
 Db 121 cgcctcgacatctgcgtcttaccctttaaaggaagacgcgcgcacatcgtccmat 180
 QY 181 atgcgcagcgggtttgaaccgccgacacgcgcacgcttcttgcggaacg 240
 Db 181 atgcgcagcgggtttgaaccgccgacacgcgcacgcttcttgcggaacg 240
 QY 241 gcaaaatcggtttggaacttgcctcccgcttttcaaaaacgcggaacatcgaa 300
 Db 241 gcaaaatcggtttggaacttgcctcccgcttttcaaaaacgcggaacatcgaa 300
 QY 301 atgttcaaacggtacacgcgtctggaacacgltgcacgagctttggaacaggcgaa 360
 Db 301 atgttcaaacggtacacgcgtctggaacacgltgcacgagctttggaacaggcgaa 360
 QY 361 ctgctgttc 369
 Db 361 ctgctgttc 369

RESULT 13

AAA81391 standard; DNA; 369 BP.

AAA81391;
 04-DEC-2000 (first entry)
 N. meningitidis MenB polynucleotide sequence ORF number 67.
Neisseria meningitidis; *Neisseria gonorrhoeae*; genome; immunogenic;
 antigen; vaccine; diagnosis; infection; antibacterial; identification;
Meningococcus B; MenB; ds.
Neisseria meningitidis.
 WO200022430-A2.
 20-APR-2000.
 08-OCT-1999; 99MO-US23573.
 09-OCT-1998; 98US-0103794.
 30-APR-1999; 99US-0132068.

(CHIR) CHIRON CORP.
 Frazer CM, Hickey E, Peterson J, Tettelin H, Venter JC;
 Masignani V, Galeotti C, Mora W, Ratti G, Scarselli M, Scarlato V;
 Rappuoli R, Pizza M;
 WPI: 2000-318079/27.
 Isolated nucleotide sequences of *Neisseria meningitidis* which can be
 used in the diagnosis and treatment of *N. meningitidis* infection and
 other *Neisseria* infections, for example, *N. gonorrhoea*.
 Disclosure; Page 216; 1760pp; English.

The present invention describes methods of obtaining immunogenic
 proteins from *Neisseria* genomic sequences. AAA81453 to AAA82414
 represent specifically claimed *Neisseria meningitidis* genomic DNA
 sequences; AAA81560 to AAA81303 and AAA825620 to AAA82663 represent
Neisseria DNA sequences and their corresponding proteins; AAA81254 to
 AAA81259 and AAA81304 to AAA81321 represent PCR primers used in the
 isolation of *Neisseria meningitidis* DNA sequences; and AAA81322 to
 AAA81452 represent *Neisseria meningitidis* MenB polynucleotide ORF
 sequences, which are all used in the exemplification of the present
 invention. The nucleic acid sequences, protein sequences, and antibodies
 against them, can be used in the manufacture of a composition. The
 composition can be used as a medicament (or in the manufacture of a
 medicament) for treating, preventing or diagnosing infection due to
Neisseria bacteria. For example, some of the identified proteins could
 be components of vaccines against *Meningococcus B*; against all serotypes;
 and/or against all pathogenic *Neisseriae*. Identification of sequences
 from the bacterium will also facilitate production of biological probes,
 particularly organism-specific probes. Attempts to make efficacious
Meningococcus B vaccines have failed mainly due to antigen tolerance.
 Multivalent vaccines have also been tried but none have successfully
 overcome antigenic variability. The provision of further, complete
 sequences may provide an opportunity to identify secreted or surface
 exposed proteins that may be presumed targets for the immune system and
 which are not antigenically variable or at least more conserved than
 other more variable regions.

Sequence 369 BP; 84 A; 107 C; 93 G; 84 T; 1 other;

Query Match 38.9%; Score 347.8; DB 21; Length 369;
 Best Local Similarity 96.2%; Pred. No. 1e-89;
 Matches 355; Conservative 1; Mismatches 13; Indels 0; Gaps 0;

QY 1 atgttcgtttacaattcagcgtgttccccccttgcgaaccgcatcgtctgtg 60
 Db 1 atgttcgtttacaattcagcgtgttccccccttgcgaaccgcatcgtctgtg 60
 QY 61 accgcctgtcccaatgcctcctcctcgtcgtcgttctgcacacgctgggaac 120
 Db 61 accgcctgtcccaatgcctcctcctcgtcgtcgttctgcacacgctgggaac 120
 QY 121 cgcctcgacatctgcgtcttaccctttaaaggaagacgcgcgcacatcgtccaat 180
 Db 121 cgcctcgacatctgcgtcttaccctttaaaggaagacgcgcgcacatcgtccmat 180
 QY 181 atgcgcagcgggtttgaaccgccgacacgcgcacgcttcttgcggaacg 240
 Db 181 atgcgcagcgggtttgaaccgccgacacgcgcacgcttcttgcggaacg 240
 QY 241 gcaaaatcggtttggaacttgcctcccgcttttcaaaaacgcggaacatcgaa 300
 Db 241 gcaaaatcggtttggaacttgcctcccgcttttcaaaaacgcggaacatcgaa 300
 QY 301 atgttcaaacggtacacgcgtctggaacacgltgcacgagctttggaacaggcgaa 360
 Db 301 atgttcaaacggtacacgcgtctggaacacgltgcacgagctttggaacaggcgaa 360
 QY 361 ctgctgttc 369
 Db 361 ctgctgttc 369

CC preparations are made, a vector suitable for performing recombination events (for the construction of a

CC preparations are made, a vector suitable for performing recombination events (for the construction of a

| | | |
|----|-------------|----------------|
| PR | 04-FEB-2000 | 2000US-0186654 |
| PR | 24-FEB-2000 | 2000US-0184668 |
| PR | 02-MAR-2000 | 2000US-0186350 |
| PR | 16-MAR-2000 | 2000US-0189874 |
| PR | 17-MAR-2000 | 2000US-0190076 |
| PR | 18-APR-2000 | 2000US-0198113 |
| PR | 19-MAY-2000 | 2000US-0205515 |
| PR | 07-JUN-2000 | 2000US-0209467 |
| PR | 28-JUN-2000 | 2000US-0214866 |
| PR | 30-JUN-2000 | 2000US-0215135 |
| PR | 07-JUL-2000 | 2000US-0216687 |
| PR | 07-JUL-2000 | 2000US-0216687 |
| PR | 11-JUL-2000 | 2000US-0217487 |
| PR | 11-JUL-2000 | 2000US-0217487 |
| PR | 14-JUL-2000 | 2000US-0218290 |
| PR | 26-JUL-2000 | 2000US-0220963 |
| PR | 26-JUL-2000 | 2000US-0220964 |
| PR | 14-AUG-2000 | 2000US-0224518 |
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| PR | 14-AUG-2000 | 2000US-0225214 |
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| PR | 14-AUG-2000 | 2000US-0225267 |
| PR | 14-AUG-2000 | 2000US-0225268 |
| PR | 14-AUG-2000 | 2000US-0225270 |
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| PR | 14-AUG-2000 | 2000US-0225759 |
| PR | 14-AUG-2000 | 2000US-0226279 |
| PR | 22-AUG-2000 | 2000US-0226681 |
| PR | 22-AUG-2000 | 2000US-0226681 |
| PR | 22-AUG-2000 | 2000US-0226688 |
| PR | 22-AUG-2000 | 2000US-0227182 |
| PR | 23-AUG-2000 | 2000US-0227009 |
| PR | 30-AUG-2000 | 2000US-0228924 |
| PR | 01-SEP-2000 | 2000US-0229287 |
| PR | 01-SEP-2000 | 2000US-0229343 |
| PR | 01-SEP-2000 | 2000US-0229344 |
| PR | 01-SEP-2000 | 2000US-0229345 |
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| PR | 14-SEP-2000 | 2000US-0232197 |
| PR | 14-SEP-2000 | 2000US-0232198 |
| PR | 14-SEP-2000 | 2000US-0232199 |
| PR | 14-SEP-2000 | 2000US-0232240 |
| PR | 14-SEP-2000 | 2000US-0232401 |
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| PR | 14-SEP-2000 | 2000US-0233065 |
| PR | 14-SEP-2000 | 2000US-0233065 |
| PR | 21-SEP-2000 | 2000US-0234273 |
| PR | 21-SEP-2000 | 2000US-0234273 |
| PR | 21-SEP-2000 | 2000US-0234424 |
| PR | 25-SEP-2000 | 2000US-0234997 |
| PR | 25-SEP-2000 | 2000US-0234997 |
| PR | 26-SEP-2000 | 2000US-0235484 |
| PR | 27-SEP-2000 | 2000US-0235834 |
| PR | 27-SEP-2000 | 2000US-0235834 |
| PR | 29-SEP-2000 | 2000US-0236327 |
| PR | 29-SEP-2000 | 2000US-0236327 |
| PR | 29-SEP-2000 | 2000US-0236368 |
| PR | 29-SEP-2000 | 2000US-0236368 |
| PR | 29-SEP-2000 | 2000US-0236570 |
| PR | 02-OCT-2000 | 2000US-0236602 |
| PR | 02-OCT-2000 | 2000US-0237037 |

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| PR | 02-OCT-2000 | 2000US-0237038 |
| PR | 02-OCT-2000 | 2000US-0237039 |
| PR | 02-OCT-2000 | 2000US-0237040 |
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| PR | 20-OCT-2000 | 2000US-0240960 |
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| PR | 20-OCT-2000 | 2000US-0241787 |
| PR | 20-OCT-2000 | 2000US-0241808 |
| PR | 20-OCT-2000 | 2000US-0241809 |
| PR | 20-OCT-2000 | 2000US-0241826 |
| PR | 20-OCT-2000 | 2000US-0242221 |
| PR | 01-NOV-2000 | 2000US-0246171 |
| PR | 08-NOV-2000 | 2000US-0246472 |
| PR | 08-NOV-2000 | 2000US-0246473 |
| PR | 08-NOV-2000 | 2000US-0246476 |
| PR | 08-NOV-2000 | 2000US-0246477 |
| PR | 08-NOV-2000 | 2000US-0246523 |
| PR | 08-NOV-2000 | 2000US-0246524 |
| PR | 08-NOV-2000 | 2000US-0246525 |
| PR | 08-NOV-2000 | 2000US-0246526 |
| PR | 08-NOV-2000 | 2000US-0246527 |
| PR | 08-NOV-2000 | 2000US-0246528 |
| PR | 08-NOV-2000 | 2000US-0246532 |
| PR | 08-NOV-2000 | 2000US-0246609 |
| PR | 08-NOV-2000 | 2000US-0246610 |
| PR | 08-NOV-2000 | 2000US-0246611 |
| PR | 17-NOV-2000 | 2000US-0246613 |
| PR | 17-NOV-2000 | 2000US-0249207 |
| PR | 17-NOV-2000 | 2000US-0249208 |
| PR | 17-NOV-2000 | 2000US-0249209 |
| PR | 17-NOV-2000 | 2000US-0249215 |
| PR | 17-NOV-2000 | 2000US-0249217 |
| PR | 17-NOV-2000 | 2000US-0249211 |
| PR | 17-NOV-2000 | 2000US-0249212 |
| PR | 17-NOV-2000 | 2000US-0249213 |
| PR | 17-NOV-2000 | 2000US-0249214 |
| PR | 17-NOV-2000 | 2000US-0249215 |
| PR | 17-NOV-2000 | 2000US-0249216 |
| PR | 17-NOV-2000 | 2000US-0249217 |
| PR | 17-NOV-2000 | 2000US-0249218 |
| PR | 17-NOV-2000 | 2000US-0249244 |
| PR | 17-NOV-2000 | 2000US-0249245 |
| PR | 17-NOV-2000 | 2000US-0249264 |
| PR | 17-NOV-2000 | 2000US-0249265 |
| PR | 17-NOV-2000 | 2000US-0249297 |
| PR | 17-NOV-2000 | 2000US-0249299 |
| PR | 17-NOV-2000 | 2000US-0249300 |
| PR | 01-DEC-2000 | 2000US-0250391 |
| PR | 01-DEC-2000 | 2000US-0250391 |
| PR | 05-DEC-2000 | 2000US-0251150 |
| PR | 05-DEC-2000 | 2000US-0251030 |
| PR | 05-DEC-2000 | 2000US-0251988 |
| PR | 06-DEC-2000 | 2000US-0251719 |
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| PR | 08-DEC-2000 | 2000US-0251856 |
| PR | 08-DEC-2000 | 2000US-0251868 |
| PR | 08-DEC-2000 | 2000US-0251869 |
| PR | 08-DEC-2000 | 2000US-0251899 |
| PR | 11-DEC-2000 | 2000US-0251990 |
| PR | 05-JAN-2001 | 2000US-0254097 |
| PR | | 2001US-0259678 |
| EA | (HUMA-) HUMAN GENOME SCI INC. | |
| PI | Rosen CA, Barash SC, Ruben SM, | |
| XX | MPI: 2001-541565/60. | |
| XX | P-PSDB: ABB17117. | |
| PT | Nucleic acids encoding 3224 human | |
| CT | useful for preventing, diagnosing, and | |
| CT | cancers and metastases - | |

(HUMA-) HUMAN GENOME SCI INC.
Rosen CA, Barash SC, Ruben SM;
WPI: 2001-541565/60.
P-PSDB: ABB17117.
Nucleic acids encoding 3224 human nervous system antigen polypeptides; useful for preventing, diagnosing and/or treating nervous system cancers and metastases -

ABAI9565 standard; DNA; 2834 BP.
AC ABAI9565;
XX 23-JAN-2002 (first entry)
DE Human nervous system related polynucleotide SEQ ID NO 11896.
XX
XX Human; neotropic; neuroprotective; cytostatic; dermatological; virucide;
KW immunosuppressive; antiinflammatory; anti-HIV; antibacterial; cancer;
KW antiparkinsonian; antischistosomal; antitubercular; cancer;
KW antipneumonic; hepatotropic; cerebroprotective; antiinflammatory;
KW antiallergic; antidiabetic; antileukemic; anticonvulsant; antifungal;
KW antiparasitic; cardiac; immune disorder; cardiovascular disorder;
KW neurological disease; infection; nephrotropic; gene therapy; vaccine; ds.
XX Homo sapiens.
XX WO200159063-A2.
XX
XX 16-AUG-2001.
XX
XX 17-JAN-2001; 2001WO-US01334.
XX
XX 31-JAN-2000; 2000US-0179065.
PR 04-FEB-2000; 2000US-0180628.
PR 24-FEB-2000; 2000US-0184664.
PR 02-MAR-2000; 2000US-0186350.
PR 16-MAR-2000; 2000US-0189874.
PR 17-MAR-2000; 2000US-0190076.
PR 18-APR-2000; 2000US-0198123.
PR 19-MAY-2000; 2000US-0205515.
PR 07-JUN-2000; 2000US-0209467.
PR 28-JUN-2000; 2000US-0214886.
PR 30-JUN-2000; 2000US-0215135.
PR 07-JUL-2000; 2000US-0216647.
PR 07-JUL-2000; 2000US-0216880.
PR 11-JUL-2000; 2000US-0217487.
PR 11-JUL-2000; 2000US-0217496.
PR 14-JUL-2000; 2000US-0218290.
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PR 14-AUG-2000; 2000US-0224518.
PR 14-AUG-2000; 2000US-0224519.
PR 14-AUG-2000; 2000US-0225213.
PR 14-AUG-2000; 2000US-0225214.
PR 14-AUG-2000; 2000US-0225266.
PR 14-AUG-2000; 2000US-0225267.
PR 14-AUG-2000; 2000US-0225268.
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PR 14-AUG-2000; 2000US-0225757.
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PR 14-AUG-2000; 2000US-0225759.
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PR 23-AUG-2000; 2000US-0227009.
PR 30-AUG-2000; 2000US-0228924.
PR 01-SEP-2000; 2000US-0229287.
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PR 01-SEP-2000; 2000US-0229345.
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PR 05-SEP-2000; 2000US-0229513.
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PR 06-SEP-2000; 2000US-0230438.
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PR 08-SEP-2000; 2000US-0231414.

PR 08-SEP-2000; 2000US-0232080.
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PR 13-OCT-2000; 2000US-0239337.
PR 20-OCT-2000; 2000US-0240960.
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PR 01-NOV-2000; 2000US-0244617.
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PR 17-NOV-2000; 2000US-0249244.
PR 17-NOV-2000; 2000US-0249245.
PR 17-NOV-2000; 2000US-0249264.
PR 17-NOV-2000; 2000US-0249265.
PR 17-NOV-2000; 2000US-0249297.
PR 17-NOV-2000; 2000US-0249299.

RESULT 25
AA77400
ID AAX77400 standard; cDNA; 4493 BP.
XX
AC AAX77400;
XX
DT 18-AUG-1999 (first entry)
XX
DE Cadherin-like polypeptide, ontherin encoding cDNA.
XX
KW Ontherin; cadherin-like polypeptide; cadherin; cell differentiation;
neuron cell; testicular; renal; spermatogenesis; vertebrae; stroke;
KW nervous system; neurological; injury; ischemia; inflammatory; tumour;
KW Alzheimer's disease; neurodegenerative disease; Parkinson's disease;
KW Huntington's chorea; amyotrophic lateral sclerosis; multiple sclerosis;
KW spinocerebellar degeneration; pain syndrome; drug screening; ds.
XX
OS Vertebrata.
XX
PN WO9929853-A1.
XX
PD 17-JUN-1999.
XX
PF 08-DEC-1998; 98WO-US25981.
XX
PR 08-DEC-1997; 97US-0067887.
XX
PA (GENY) GENETICS INST INC.
XX
PI Israel DI;
XX
DR WPI; 1999-385603/32.
DR P-PSDB; AAY21687.
XX
PT New isolated cadherin-like polypeptides useful for treating
PT Alzheimer's disease
XX
PS Claim 5; Page 96-101; 108pp; English.
XX
CC This cDNA encodes a cadherin-like polypeptide, ontherin, which can bind
to at least one of Ca²⁺, a catenin or a cadherin. The ontherin (OT)
protein regulate differentiation of neuronal cells; regulate survival of
differentiated neuronal cells; regulate proliferation of testicular germ
line cells; and/or regulate proliferation of renal cells. The polypeptide
preferably regulate spermatogenesis. The OT polypeptides are involved in
the formation and maintenance of ordered spatial arrangements of
differentiated tissues in vertebrates, both adult and embryonic, and can
be used to generate and/or maintain an array of different vertebrate
tissue both in vitro and in vivo. OT therapeutics can be used for
treating e.g. neurological conditions deriving from acute, subacute, or
chronic injury to the nervous system, including traumatic, chemical, and
vascular injury and deficits (such as the ischemia resulting from stroke),
together with infectious/inflammatory and tumour induced injury; aging of
the nervous system such as Alzheimer's disease; chronic neurodegenerative
diseases of the nervous system (Parkinson's disease, Huntington's chorea,
amyotrophic lateral sclerosis as well as spinocerebellar degenerations);
and chronic immunological diseases of the nervous system or affecting the
nervous system including multiple sclerosis, for selective ablation of
sensory neurons, e.g. in the treatment of chronic pain syndromes, or in
the treatment of neoplastic or hyperplastic transformations such as may
occur in the central nervous system. The products may also be used in
other therapeutic applications related to their activities. The products
can also be used for detection, diagnosis and drug screening.
XX
SQ Sequence 4493 BP; 1075 A; 1344 C; 1211 G; 863 T; 0 other;

Query Match 4.3%; Score 38; DB 20; Length 4493;
Best Local Similarity 52.5%; Pred. NO. 1.5;
Matches 83; Conservative 0; Mismatches 75; Indels 0; Gaps 0;

QY 321 ctgggaacacgctgacgagcttgacaagggcgaagggctgctgcatcaccgacgca 380

Db 943 ctccgacacgacactgtgtagcagcgagacagcgagggctccttaccacgaagcagcg 1002
QY 381 catcgagcactgacgatttgagcgagcgtacatcagcgaacgactccgtccactgac 440
Db 1003 catcgacgagcgtccctgtgctcgccacaatgccaatgctgacgagtggt 1062
QY 441 cgcactgtacaagcgcgcgaatcacaagcgatagaca 478
Db 1063 cgcacaagcacaagagatctgcatgacatcagaagtgataga 1100
RESULT 26
AAS3116
ID AAS3116 standard; cDNA; 8277 BP.
XX
AC AAS3116;
XX
DT 04-DEC-2001 (first entry)
XX
DE Human diagnostic and therapeutic polynucleotide (DITHP) #131.
XX
KW Human; receptor; diagnostic; therapeutic; gene therapy; vaccine;
cell proliferative disorder; Crohn's disease; lymphoma; leukemia;
KW acquired immune deficiency syndrome; AIDS; autoimmune disorder;
respiratory disorder; ss.
XX
OS Homo sapiens.
XX
PN WO200162927-A2.
XX
PD 30-AUG-2001.
XX
PE 21-FEB-2001; 2001WO-US06059.
XX
PR 24-FEB-2000; 2000US-0184693.
PR 24-FEB-2000; 2000US-0184697.
PR 24-FEB-2000; 2000US-0184698.
PR 24-FEB-2000; 2000US-0184768.
PR 24-FEB-2000; 2000US-0184769.
PR 24-FEB-2000; 2000US-0184770.
PR 24-FEB-2000; 2000US-0184771.
PR 24-FEB-2000; 2000US-0184772.
PR 24-FEB-2000; 2000US-0184773.
PR 24-FEB-2000; 2000US-0184774.
PR 24-FEB-2000; 2000US-0184776.
PR 24-FEB-2000; 2000US-0184777.
PR 24-FEB-2000; 2000US-0184797.
PR 24-FEB-2000; 2000US-0184813.
PR 24-FEB-2000; 2000US-0184837.
PR 24-FEB-2000; 2000US-0184841.
PR 24-FEB-2000; 2000US-0185213.
PR 24-FEB-2000; 2000US-0185216.
PR 12-MAY-2000; 2000US-0203785.
PR 15-MAY-2000; 2000US-0204226.
PR 16-MAY-2000; 2000US-0204525.
PR 16-MAY-2000; 2000US-0204821.
PR 16-MAY-2000; 2000US-0204908.
PR 16-MAY-2000; 2000US-0205232.
PR 17-MAY-2000; 2000US-0204815.
PR 17-MAY-2000; 2000US-0204863.
PR 17-MAY-2000; 2000US-0205221.
PR 17-MAY-2000; 2000US-0205285.
PR 17-MAY-2000; 2000US-0205286.
PR 17-MAY-2000; 2000US-0205287.
PR 17-MAY-2000; 2000US-0205323.
PR 17-MAY-2000; 2000US-0205324.
XX
PA (IMCY-) INCYTE GENOMICS INC.
XX
PI Panzer SR, Spiro PA, Banville SC, Shah P, Chalup MS, Chang SC;
Chen A, D'Sa SA, Amshy S, Dahl CR, Dam TC, Daniels SE;
Dufour GE, Flores V, Fong WT, Greenwalt LB, Hillman JL, Jones AL;

RESULT 42
AA199682/c
ID AA199682 standard; DNA; 441529 BP.
XX
AC AA199682;
XX
DT 15-JAN-2002 (first entry)
XX
DE Mycobacterium tuberculosis strain H37Rv genome SEQ ID NO 1.
XX
KW Mycobacterium tuberculosis; strain H37Rv; strain CDC 1551; genome;
XX variation; epidemiology; patient treatment; epidemic monitoring; ds.
XX
OS Mycobacterium tuberculosis.
XX
FN US6294328-B1.
XX
PD 25-SEP-2001.
XX
PF 24-JUN-1998; 98US-0103840.
XX
PR 24-JUN-1998; 98US-0103840.
XX
PA (GENO-) INST GENOMIC RES.
XX
PI Fleischmann RD, White OR, Fraser CM, Venter JC;
XX WPI; 2001-647261/74.
XX
PT Evaluating strain variation of Mycobacterium tuberculosis, comprises
PT determining the nucleotide sequence of the strain at positions in the
PT genome corresponding to positions where M. tuberculosis strains CDC
PT 1551 and H37Rv differ
XX
PS Claim 3; SEQ ID NO 1; 3pp + Sequence Listing; English.
XX
CC The invention relates to evaluating strain variation within and between
CC different populations of the tuberculosis bacterial pathogen,
CC Mycobacterium tuberculosis or related Mycobacterium by determining the
CC nucleotide sequence of the first strain at positions in the complete
CC sequence of the genome that correspond to positions that differ in the
CC nucleotide sequences of M. tuberculosis strains CDC 1551 (AA199683) and
CC H37Rv (AA199682). The method is useful for evaluating strain variation of
CC M. tuberculosis and has valuable application in the fields of
CC tuberculosis genetics, epidemiology, patient treatment and epidemic
CC monitoring.
CC Note: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from USPTO
CC at seqdata.uspto.gov/sequence.html?docID=6294328B1.
XX
SO Sequence 4411529 BP; 758565 A; 1449983 C; 1444602 G; 758379 T; 0 other;
Query Match 3.9%; Score 35.2; DB 22; Length 4411529;
Best Local Similarity 47.3%; Pred. No. 1.2e+02;
Matches 107; Conservative 0; Mismatches 119; Indels 0; Gaps 0;
XX
QY 366 gttcaatcagcgacatcggaagctagatttggcggaagctacatcagcgacgact 425
DB 2980438 GTACGGCACCACCGCGTGGGACACGACATGCGGGACACTCTACAGCTGTGCG 2980379
XX
QY 426 tcggttcactgacgcgcattgtcaagcgcggaataatcaagcgatagacaatacat 485
DB 2980378 CGCAATCATGCAACGCGCTTGACCGACGACATGATGACTCCAMCCCTGCCGATCTC 2980319
XX
QY 486 gcaagcgagcgaggtgcgcggaagaacgcgcgcacggcgacataaagggtgtca 545
DB 2980318 AGCGCGGTCCACCGCCGCCGCTCCACAAAGATCAAGGCCGCCACCTCTGACGAGCTGA 2980259
XX
QY 546 acaaatcaataaggcgctgcgcgcggaagcggaacacatcatcctg 591
DB 2980258 AACCATACACAAAGCATGCGCCGACCCCTACCAAGCGCTTGTGCTG 2980213

RESULT 43
AA1994202
ID AA1994202 standard; DNA; 1479 BP.
XX
AC AA1994202;
XX
DT 21-MAY-1998 (first entry)
XX
DE AEP11a clone 63GA3 endoglucanase DNA.
XX
KW Endoglucanase; cellulase; carboxymethylcellulose; cellulose;
XX biomass; beta-1,4-glycosidic bond; hydrolysis; saccharification;
XX thermostable enzyme; thermophilic; glycosidase; ss.
XX
OS Archaeobacterium AEP11a (clone 63GA3).
XX
FN WO97/44361-A1.
XX
PD 27-NOV-1997.
XX
PF 22-MAY-1997; 97WO-US08793.
XX
PR 22-MAY-1997; 96US-0651572.
XX
PA (RECO-) RECOMBINANT BIOCATALYSIS INC.
XX
PI Lam DE, Mathur EJ;
XX WPI; 1998-018435/02.
XX P-PSDB; AAW34994.
XX
PT Endoglucanase(s), preferably from archaeal bacterium, AEP11a -
PT useful to degrade carboxymethylcellulose and hydrolyse of
PT beta-1,4-glycosidic bonds in cellulose
XX
PS Claim 3; Fig 1J; 164pp; English.
XX
CC This DNA sequence from archaeobacterium hydrothermal vent isolate
CC AEP11a clone 63GA3 encodes an endoglucanase (see AAW34994) that is
CC able to degrade carboxymethylcellulose and to hydrolyse the
CC beta-1,4-glycosidic bonds in cellulose, and which shows homology to
CC the thermostable endoglucanase (see AAW34985) of AEP11a (ATCC 97516).
CC The DNA can be used in the recombinant production of the
CC endoglucanase and as a probe to identify similar sequences. 24
CC endoglucanase polynucleotides (see AAT94193-216) are claimed. These
CC can be incorporated into plasmid or virus-derived vectors for use
CC in a claimed method of producing enzymes in transformed host cells.
CC The claimed endoglucanases (see AAW34985-W35008) can be used to
CC degrade cellulose for the conversion of plant biomass into fuels
CC and chemicals, for use in detergents, textiles, animal feed, waste
CC treatment, and in the fruit juice and brewing industries for the
CC clarification and extraction of juices.
XX
SO Sequence 1479 BP; 370 A; 366 C; 454 G; 289 T; 0 other;
Query Match 3.9%; Score 35; DB 19; Length 1479;
Best Local Similarity 52.4%; Pred. No. 7.1;
Matches 77; Conservative 0; Mismatches 70; Indels 0; Gaps 0;
XX
QY 317 acggttggaacagctgcaagcgcttggacaaggcggaaggtgctgtcatcagc 376
DB 1112 agggcctcgaaacgtctcgtatgactlgaagagactctacgcttgcgaatgagtga 1171
XX
QY 377 cgcacatcgcgagctacagatttggcggaagctaatcagccagaggttccgttcacc 436
DB 1172 cggagaacggygattgcygagatgycagaacagcagcgtcttactactcgttgagcacc 1231
XX
QY 437 tgaccgcattgacaagccgcgaata 463
DB 1232 tcgcygctatccacaagcgagatgaga 1258

RESULT 44
AAZ53334/C
ID AAZ53334 standard; DNA; 1812 BP.
XX
AC AAZ53334;
XX
DT 21-MAR-2000 (first entry)
XX
DE Neisseria meningitidis ORF 151 partial DNA sequence SEQ ID NO:617.
XX
KW Neisseria meningitidis; Neisseria gonorrhoeae; antigen; vaccine;
KW antigenic; diagnosis; immunogenic; infection; meningitis; septicemia;
KW antibacterial; gene therapy; ds.
XX
OS Neisseria meningitidis.
XX
PN W09957280-A2.
XX
PD 11-NOV-1999.
XX
PE 30-APR-1999; 99WO-US09346.
XX
PR 01-MAY-1998; 98US-0083758.
PR 31-JUL-1998; 98US-0094869.
PR 02-SEP-1998; 98US-0098994.
PR 02-SEP-1998; 98US-0099062.
PR 09-OCT-1998; 98US-0103749.
PR 09-OCT-1998; 98US-0103794.
PR 09-OCT-1998; 98US-0103796.
PR 25-FEB-1999; 99US-0121528.
XX
PA (CHIR) CHIRON CORP.
PA (GENO-) INST GENOMIC RES.
XX
PI Fraser C, Galeotti C, Grandi G, Hickey E, Masignani V, Mora M,
PI Petersen J, Pizsa M, Rappuoli R, Ratti G, Scalato E, Scarselli M,
PI Tettelin H, Venter JC;
XX
DR WPI; 2000-062150/05.
XX
P-PSDB; AAY74572.
XX
PT Novel Neisserial polypeptides predicted to be useful antigens for
PT vaccines and diagnostics
XX
PS Claim 7; Page 433; 1453pp; English.
XX
CC AAZ53015 to AAZ54536, AAZ54577 to AAZ54615, and AAY74253 to AAY75941
CC represent novel Neisseria meningitidis and N. gonorrhoeae polynucleotides
CC and polypeptides. AAZ54537 to AAZ54576 and AAZ54616 to AAZ5473 represent
CC PCR primers used in the exemplification of the present invention. The
CC polypeptides, the polynucleotides, antibodies and compositions of
CC the invention can be used as vaccines, as diagnostic reagents, and as
CC immunogenic compositions. The polypeptides can be used in the
CC manufacture of medicaments for treating or preventing infection due to
CC Neisserial bacteria (e.g. meningitis and septicemia), to detect the
CC presence of Neisseria bacteria, or to raise antibodies. They may also
CC be used to screen for agonists or antagonists, which may themselves
CC have use as antibacterial agents. The polynucleotides of the invention
CC may also be used in gene therapy protocols.
XX
SQ Sequence 1812 BP; 461 A; 537 C; 484 G; 330 T; 0 other;

Query Match 3.9%; Score 35; DB 21; Length 1812;
Best Local Similarity 52.4%; Pred. No. 7.6;
Matches 77; Conservative 0; Mismatches 70; Indels 0; Gaps 0;

OY 339 ggccttgagacagcgagagcgtgctgtcaccacgcgcacatgcgcagctacatgtt 398
DB 966 GCCCTCGTACGTCACCAACGCGCTGGTGTGACCATTAAGTCATCGTCAGCGCTTC 907
OY 399 gggcgagacgtacacacgcagcagcttcgctccaccctgacccgcatgtacacgcgc 458

DB 906 GTCACGCTCAACATCGCAGCCCTTTGGGCTTTGCTTGTGCGTGAATGCTTACCCGAT 847
OY 459 gaaatcaagcgatagacaaatcat 485
DB 846 GCCGATGCTCTCAATACCGGAATTAAT 820
RESULT 45
ID AAZ14651 standard; DNA; 77536 BP.
XX
AC AAZ14651;
XX
DT 08-AUG-2000 (first entry)
XX
DE Nucleotide sequence of the FK-520 biosynthetic gene cluster.
XX
KW FK-520; polyketide synthase; PKS; gene cluster; immunosuppressant;
KW Streptomyces hygroscopicus var. ascomyceticus; immunophilin;
KW FK-506 binding protein; polyketide compound; transplant rejection;
KW graft-versus-host disease; uveitis; alopecia universalis;
KW autoimmune chronic active hepatitis; inflammatory bowel disease;
KW multiple sclerosis; primary biliary cirrhosis; scleroderma;
KW neurite outgrowth; nerve regrowth; Parkinson's disease;
KW Alzheimer's disease; stroke; traumatic spinal cord; brain injury;
KW peripheral neuropathy; ss.
XX
OS Streptomyces hygroscopicus.
XX
FH Key Location/Qualifiers
FH CDS complement (412..1836)
FT /tag= a
FT /note= "fkbp gene"
FT CDS complement (2020..3579)
FT /tag= b
FT /note= "fkbpv gene"
FT CDS 3969..4496
FT /tag= c
FT /note= "fkbr2 gene"
FT CDS complement (4593..5488)
FT /tag= d
FT /note= "fkbr1 gene"
FT CDS 5601..6818
FT /tag= e
FT /note= "fkbp2 gene"
FT CDS 6808..8052
FT /tag= f
FT /note= "fkbf gene"
FT CDS 8156..8824
FT /tag= g
FT /note= "fkbg gene"
FT CDS complement (9122..9883)
FT /tag= h
FT /note= "fkph gene"
FT CDS complement (9894..10994)
FT /tag= i
FT /note= "fkbi gene"
FT CDS complement (10987..11247)
FT /tag= j
FT /note= "fkbp gene"
FT CDS complement (11244..12092)
FT /tag= k
FT /note= "fkpk gene"
FT CDS complement (12113..13150)
FT /tag= l
FT /note= "fkpl gene"
FT CDS complement (13212..23988)
FT /tag= m
FT /note= "fkpc gene"
FT misc_feature complement (13452..13662)
FT /tag= n
FT /note= "ACp6"

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